

REMARKS

Claims 18, 21, 27, 29, 30, 32-34, 38-40 and 63-72 remain pending in this application. Claim 41 is canceled by this amendment without prejudice or disclaimer. Each of the pending claims is believed to define an invention that is novel and unobvious over the cited references. Favorable reconsideration of this case is respectfully requested.

Claims 18, 21, 27, and 72 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 7,173,650 to Cohen-Solal et al. in view of U.S. Patent Number 6,678,413 to Liang further in view of U.S. Patent Number 6,069,655 to Seeley.

Independent claims 18 and 72 have been amended to recite that the sensing unit operated in a second mode obtains higher quality imagery of a subset of the scene including the interesting target than that obtained by operating the sensing unit in the first mode. The higher quality imagery may be obtained in the claims by at least one of panning, tilting and zooming, using super-resolution algorithms, digitally zooming to the image, and employing different lenses or filters, or using a robotic actuator.

Additionally, independent claims 18 and 72 have been amended to recite that in the first mode, a scene is automatically scanned for targets. The image data of the scene obtained from the sensing unit in the first mode is processed to automatically detect the presence of an interesting target in the scene. Also, in the second mode, targets are automatically tracked.

In comparison, none of the cited references discloses automatically scanning a scene for a target and automatically detecting the presence of an interesting target in the scene.

In Cohen-Solal, the scene is manually scanned to manually detected any interesting targets. As described in column 4, lines 23-46, of Cohen-Solal, the video image data of the scene 104 from the camera 102 is displayed on a computer monitor 110. An input device is used to select the desired target 106A in the video image data. The selection is performed manually by an operator. There is no disclosure in Cohen-Solal of automatically detecting an interesting target within the scene. Neither Liang or Seeley disclose or suggest this feature and are not cited in the Office Action such.

Furthermore, none of these cited references mentions obtaining in the second mode higher quality imagery of a subset of the scene including the interesting target than obtained by operating the sensing unit in the first mode. That is, once an interesting target is automatically detected, higher quality imagery of the interesting target, not of the entire scene, is obtained in the claimed invention. Thus, the sensing device is able to "home in on the target and to obtain high-resolution image data." Please see page 20, line 5-12 and Figure 5 of the present application.

Neither Cohen-Solal nor Liang is cited as teaching this feature. Seeley is relied on in the Office Action as teaching obtaining higher quality imagery of the target than that obtained by operating the sensing unit in the first mode. Seeley describes take a "high resolution" full frame of video taken from a camera observing the scene. The full frame image of the scene is processed. Please see column 12, lines 58 – column 13, line 30 of Seeley. Seeley does not describe the ability to "home in on the interesting target." Seeley simply discusses taking high quality images of the entire scene. There is no mention in Seeley of obtaining high quality imagery of a subset of the scene including the interesting target as is now required by amended dependent claims 18 and 72.

In view of the above, it is clear that the claimed invention is not obvious to one of ordinary skill in the art. Therefore, the withdrawal of this rejection is respectfully requested.

Claims 29-30, 32-33, 38-39, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen-Solal in view of Liang further in view of U.S. Patent Number 7,020,305 to Liu.

Claims 29-30, 32-33, 38-39 depend directly or indirectly from independent claim 18 and are patentable for at least the reasons discussed above regarding independent claim 18. Liu does not supplement Cohen-Solal or Liang to render the claimed invention obvious.

Regarding independent claim 41, this claim is canceled.

Liu relates to detecting the movement of an object in the frame, for example, a target's head. In particular, figures 5 and 6 of Liu describe a method for detecting head motion between two images of a face, please see column 5, line 53 – column 6, line 64 of Liu. The cited sections of Liu in the Office Action describe determining head motion by detecting corners in images matching those corners, using a robust estimation technique to eliminate false matches and the like.

Additionally, in Liu, individually model parameters are detected from the image. The model is estimated based on those parameters.

In view of the above, it is clear that the cited references do not render the claimed invention obvious. Therefore, the withdrawal of this rejection is respectfully requested.

Claims 34, 40, 63-66, and 70-71 have been rejected under 35 U.S.C. 103 as being unpatentable over Cohen-Solal in view of Liang, Seeley and further in view of U.S. Patent Number 6,437,819 to Loveland.

Regarding independent claim 64, this claim has been amended along the lines of independent claim 1 to recite that higher quality imagery of a subset of a scene including the interesting target than that obtained by operating the sensing unit in a first mode is obtained in the second mode. As described above in connection with independent claim 18, the cited references do not render this claim obvious. Loveland does not supplement Cohen-Solal, Seeley or Liang to render the claimed invention obvious.

Regarding the other claims in this rejection, those claims depend directly or indirectly from independent claims 18 or 64 and are allowable for at least the reasons discussed above regarding independent claims 18 and 64.

Claims 67-69 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen-Solal in view of Seeley and Liang in view of Loveland and further in view of U.S. Patent Number 6,570,608 to Tserng.

Claims 67-69 depend from independent claim 64 and are patentable for at least the reasons discussed above regarding independent claim 64. Tserng does not supplement the previously discussed references to render the claimed invention obvious. Therefore, the withdrawal of this rejection is respectfully requested.

Accordingly, it is respectfully submitted that only allowable claims remain pending in this application. Early issuance of a Notice of Allowance is respectfully solicited.

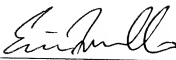
If the Examiner is of the opinion that the prosecution of this application would be advanced by a personal interview, the Examiner is invited to telephone undersigned counsel to arrange for such an interview.

The Commissioner is authorized to charge any fee necessitated by this Amendment to our Deposit Account No. 22-0261.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Respectfully submitted,

Dated:

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